

THE  
Unitype

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Wood & Nathan Co.

Number 1 Madison Avenue

New York City



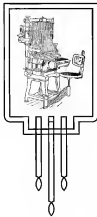






# UNITYPE

## ONE-MAN TYPE SETTING MACHINE



Wood & Nathan Co.

Number 1 Madison Avenue

New York City



### The Unity

All the reading matter in this pamphlet  
was set on a Unity.

# UNITYPE FEATURES

It is the most simple, economical and practical machine for setting and distributing type. It can be operated by one person, without assistance from machinist or attendant.

It is easily understood and operated, not requiring an expert to keep it in operation. Its working parts are few and easily accessible. It uses foundry type, thus preserving typographical excellence and accuracy.

Its distributing and setting mechanisms are combined on one machine, and the type distributes directly into the magazine of the setter; no attendant is required to transfer it from distributor to setter.

Its distribution is automatic, the machine taking lines of dead matter from a galley as needed, without any attention from the operator. It automatically removes leads from matter being distributed.

It sets from 2,500 to 3,500 ems per hour in the hands of one operator, according to his skill; or the product can be doubled by a second person assisting.

Its proofs are much cleaner than hand set matter, because there can be no mistakes in distribution, and all errors from that source are eliminated.

It allows of corrections being made from an ordinary case, without stopping the machine for that purpose.

It enables the editor or reporter to produce matter in type as readily as he can write it on a typewriter.

It involves no expense for gas, no waste of metal; requires no metal pot; evolves no unhealthful fumes; is always ready for work without loss of time for "heating up." Being a simple machine, with no heat, and only a few parts in constant operation, the cost of repairs and supplies is very light.

It requires less than one-fourth horse-power to drive it. It can be supplied with an electric motor attached, if desired; this makes it possible to locate the machine in the most convenient position, independent of belts and shafting.

It is adapted to weeklies, dailies, periodicals, or book work, and will save more than half the cost of hand composition, while giving exactly the same superior typographical results as hand-set type.

The Simplex, the forerunner of the **Unitype**, is in daily operation in all sorts of offices, from the country weekly to large metropolitan publications, with most satisfactory results.

## Some Advantages of the UNTYPE over the Simplex

- Larger output.
- Fewer transpositions.
- No turned characters.
- Type carrying belts eliminated.
- No vibration on an unsteady floor.
- Line of type right under operator's eye.
- Can be set at any angle to get best light.
- Less wear on the important parts.
- Less expense for supplies, such as belts, etc.
- A simpler machine with fewer complications.
- More positive and certain in its movements.
- Automatic throw-off on the distributor, relieving strain on machine and type.
- All the advantages of both the Standard and Adjustable machines combined in one machine.
- More convenient for the operator, as most of the machine is within easy reach, without leaving chair.
- A greater improvement on the Simplex than the Simplex was on all previous type-setting machines.



# DESCRIPTIVE

The body of the **Unitype** consists of two cylinders, one above and rotating on the other, having a common axis. In both cylinders, extending vertically their full length, are ninety parallel channels, those in the lower cylinder forming the magazine into which type distributes from the channels of the upper cylinder and is stored for resetting. The channels are slightly wider than the body of the type the machine is made to set.

## **Two Cylinders Form the Body**

On the forward side of each channel in the lower cylinder a series of steel strips are inserted and project part way across. They are called "wards," as they have the same functions as the wards of a lock. The combination of wards in each channel differs from that in all other channels. Each type character is given a combination of nicks corresponding with the combination of wards in one particular channel, so it can enter this channel only. The central ward extends the full length of the channel, and is cut off just short enough to permit one type to be pushed out at the bottom when its key is touched.

## **Construction of the Distributer**

The channels of the upper cylinder have no wards, so that lines containing all characters will enter any channel in this cylinder. In each distributor channel is a sliding weight, the function of which is to press lightly down on the line of dead type contained in the channel, and make the bottom type drop quickly when it comes to its proper channel in the lower cylinder. The weight is lifted when a channel is to be loaded, the line of dead type inserted in the channel, and the weight lowered again on top of the line, these actions being automatic.

## **Type is Loaded Automatically**

As the channels of the upper cylinder are supplied with lines of dead type the cylinder is rotated step by step, bringing each channel in turn directly over each channel in the lower cylinder. At each step or movement of the distributor the bottom type in each of its channels is tested on the wards in the channels of the lower cylinder. Every bottom type having a combination of nicks matching the combination of wards in the channel over which it stops drops down

## **The Method of Distribution**

into its channel, while those type which differ in combination rest on the tops of the wards, they in turn dropping when the rotation of the cylinder brings them to their respective channels. As the distributor can supply type much faster than operators can set it up, it is not necessary to keep it working all the time.

The mechanism by which these results are accomplished is most accurately made, and yet is wonderfully simple in its construction. The

**The Mechanism is Very Simple** channels in the two cylinders are cut with the greatest precision. When it is understood that each of the ninety channels in the upper cylinder match perfectly all of the channels in the lower cylinder this accuracy will be appreciated. This in itself would not secure proper distribution unless the upper cylinder were moved positively at each step to the point where the channels all coincide, and held there rigidly an instant to permit the dropping of any type which may have arrived at its channel in the lower or setter cylinder.

This accuracy of movement is obtained by employing a cam to impart the step-by-step movement to the revolving cylinder. The cam revolves on

**A Cam Rotates the Distributer** a horizontal shaft supported by a crosshead on top of the machine, which in turn is firmly attached to a rigid, vertical, stationary main shaft extending through both cylinders. Motion is imparted to the cam by shafting and gears which connect with the main driving shaft of the machine, which is located beneath the lower cylinder. The cam thrusts against rolls which bear on pins driven solidly into the top of the cylinder. These rolls, forty-five in number, form a circle about four inches less in diameter than the cylinder. As there are just half as many rolls as there are channels, each revolution of the cam gives the cylinder two forward thrusts, moving it each time a distance equaling the distance between the channels. The rolls are shaped to conform to the shape of the cam, and revolve on their bearing pins when the cam thrusts against them, thus preventing friction and wear on the cam. A simple and effective means is provided for adjusting the cam when necessary.

Should anything prevent the type from dropping freely from the upper to the lower cylinder, or a channel in the lower cylinder fill up, or

**Stops Automatically if Clogged** if the forward movement of the distributor is stopped or "blocked" by any cause, an automatic clutch acts instantly, releasing the pressure of the cam, thus stopping the driving mechanism and preventing injury to the machine or type; and the cylinder cannot be moved forward again

until the cause of the "hock" has been removed. The clutch requires no attention from the operator.

The mechanism for loading the channels of the distributing cylinder with lines of dead type is attached to an upright, the upper end of which is fastened to the crosshead, and the lower end to one of the legs which extend upward from the base of the machine to support the cylinders. The shaft that actuates the loader is connected with the shaft of the cam that moves the cylinder, so that the two work in unison. A bracket on the loader serves as a shelf on which the galley of dead type for distribution is placed.

The working parts of the loading mechanism consist of an arm, which lifts the weights in the channels of the distributing cylinder; a plunger that pushes a line of dead matter into the channel when the weight is raised; and a trigger device which causes these parts to act whenever an empty channel reaches the loading point as the distributing cylinder rotates. These parts are all driven by a single shaft located beneath the loader, this shaft in turn being driven by a vertical shaft that extends up from the main driving shaft beneath the cylinder. This vertical shaft also imparts motion to the distributor cam shaft on the crosshead.

A galley of dead type is placed in position on the loader bracket, with the type facing outward, and the distributor cylinder is started rotating. When an empty channel in the cylinder approaches the loading point a projecting lug on the top of the sliding weight in that channel trips the trigger on the loader, thereby releasing a spring and starting the loader into action; the lifter arm raises the sliding weight high enough to allow a line of dead type to enter the channel beneath the weight; and the plunger then moves forward, pushing a line of dead type from the end of the galley into the channel. The continuing movement of the loading mechanism then returns the plunger and lifter arm to their position of rest. As the lifter arm lowers it leaves the sliding weight resting on top of the line just loaded into the channel. The pressure of the weight holds the line in the channel and accelerates the dropping of the type when a character reaches its channel in the setter cylinder. As the plunger withdraws, the column of dead type in the galley is moved forward, bringing the succeeding line in position to be loaded into the next empty channel.

The instant that the sliding weight is raised by the lifter arm the trigger is released and then returns to

position of rest, simultaneously setting in position a connected part which stops the loader when it has completed the work of loading the line of

**No Interruption to Distribution** dead type into the channel, and the loader then remains stationary until the continued rotation of the cylinder brings the projecting lug on the sliding weight in another entirely empty channel into contact with the trigger. The various movements of the loading mechanism are performed in the intervals between the steps or forward movements of the cylinder, so that loading and distributing proceed simultaneously. The loader acts quietly, and its parts are so constructed that the type is not subjected to strain or injury.

If leaded matter is being distributed the plunger is adjusted, by a very simple arrangement, to pull the leads; as it recedes after having car-

**Loader Plunger Pulls the Leads** ried a line of type into the distributor channel the plunger withdraws the lead which follows that line and drops it into a box located below the loader. As they drop into the lead box the leads pile themselves up in proper order for use.

The distributing cylinder is not delayed by loading, but rotates at its normal speed. If every channel in the distributing cylinder should be empty when it is started, the loader would fill them all in less than a minute. In practice, however, there are generally not more than three or four lines to be loaded in each revolution of the cylinder.

The lower-case letters and other characters most frequently used are located in channels in the lower cylinder directly in front of the operator,

**A Few Points on Distribution** and as they become filled or emptied the operator stops or starts the distributor by pressing a conveniently located button.

When the dead type galley becomes empty it is the work of but a moment to take it off and substitute a full galley of either leaded or solid matter.

The sorts distribute into the channels of the lower cylinder in about the proportion needed by the operator. This depends to some extent upon the character of the matter which is being set and distributed; so provision is made for quickly removing from their channels in the lower cylinder any sorts which distribute faster than required, or for replenishing the supply of those which do not distribute rapidly enough. Gallies for containing a reserve supply of the sorts are kept in a cabinet sent with the machine.

On the setting mechanism is a keyboard with ninety keys—one for each channel in the cylinder—each key being connected by levers and wires with a small

plunger at the bottom of the channel containing the character that it represents. The front end of the plunger rests immediately behind the foot of the bottom type in its channel, the point of the plunger being thinner than this type. When a key is depressed on the keyboard, its corresponding plunger is moved forward, carrying one type out ahead of it. The keys work very easily, a light touch of the finger will depress them, and their action is practically instantaneous.

The characters most used are located in channels having most convenient position, and the keys on the keyboard are correspondingly arranged. Playing forward any succession of keys may be played with greatest rapidity, and the type each key represents will come into line in the desired order. Taking advantage of this, letters forming frequently-used words and syllables are grouped to assist the speed of operators; for instance, "and," "com," "the," and many others may be played at one stroke, as if one character. Operators will quickly memorize a large number of words and syllables, the letters forming which are thus arranged consecutively. There is hardly a word in the English language that does not present such a combination of at least two letters. Note page 15 for example.

The plungers eject the type upon the flat upper surface of a rapidly revolving disc which encircles the bottom of the cylinder, its upper surface being on a level with the bottom of the channels, and having a projecting vertical rim on its outer edge to keep the type on the disc. This disc carries the type around to the right-hand side of the machine, where a switch raises them between the flanges of a vertical, revolving wheel; the flanges of this wheel, immediately above the disc, are held just far enough apart to permit type to pass between them freely, but as the wheel continues its revolution, the flanges close together, gripping any type which has run between them, and carries these type in a vertical position to a point about three inches above the surface of the disc. Here the type are released from contact with the flanges, and pass between two rapidly revolving rolls that carry them forward, on their feet, to a channel or type-way leading across the front of the machine, over to the point where they are justified into lines of the required measure.

The lifting wheel will pick up type as fast as they are guided between its flanges by the switch, regardless of whether they reach this point at regular intervals or not; if the type should arrive at this point in a con-

tinuous stream, the head of each type pressing against the foot of its predecessor, the wheel would pick them up one after the other without delay, and

**A Lifting Wheel** so it is capable of raising hundreds of type  
**Raises the Type** each minute. The type thus follow one another through the rolls, forming a long continuous line, which extends, in the type-way, clear across the back of the keyboard, the face of the type in this line being in convenient view and reach of the operator. If it should happen that two type arrive together at the point where they are deflected to the lifting wheel, the one nearest the cylinder is detained by a light spring until the one next to the rim of the disc has passed; the detained type then slips away from the spring and follows to the wheel. This separation prevents the type from clogging.

The type-way through which the long line passes leads to the mechanism for justifying, which is at the left of the keyboard. When the long  
**The Method of** line has filled the type-way, the operator,  
**Justification** who is seated on a chair which is supported by an arm attached to the base of the machine, swings on the chair around to the left, picks up a small instrument known as a "grab," and with it separates from the long line enough matter to practically fill a line of the width of the measure being set. Between each word in the line a three-em space was played from the keyboard. The operator increases or reduces the amount of space between the words enough to properly justify the line, reading the line at the same time, and correcting any errors which may have been made in setting. It is thus possible to produce matter remarkably clean and free from errors. Any errors which may be overlooked and appear in the proof are corrected just as in hand-set matter, without delaying the machine.

A convenient feature in the justifying mechanism is that the spaces and quads distribute directly into boxes within easy reach for use in justifying. These sorts return to the point  
**Space and Quad** where they are needed, without handling  
**Conveniences** or attention from the operator, and will distribute properly regardless of which end is up or which side around the operator inserts them in the line when justifying.

Having justified the line the operator touches a thumb lever located beside the galley. The thumb lever releases a pawl which engages with  
**Galley Receives** a ratchet on a rotating wheel under the  
**Justified Line** keyboard. In one revolution of the wheel, the rule which stands behind the type line is drawn down below it, while the line pusher comes

up in front of the line and pushes it into the galley, which rests on a support behind the rule. The line pusher then returns to its position of rest, and the rule simultaneously returns to position ready to support the succeeding line while it is being justified, the whole movement of these parts occupying but a moment.

When a galley has been filled it is removed from the support by moving back a latch, and an empty galley substituted. When news matter is being set galleys of special width are **Operator's Needs** used, the type in such galleys being all **All Anticipated** locked up ready for proving when removed from the machine. Beside the justifier mechanism, and within easy reach, is a partitioned shelf for containing rules, dashes, heads, etc. Every requirement of the operator has been anticipated, and conveniences provided by which the work can be accomplished without inconvenience or loss of time.

All parts of the machine have been designed in the most simple and substantial form, particular attention having been given to making the parts accessible and interchangeable. Dupli- **Interchangeable** cates of parts subject to wear are sent **Duplicate Parts** with machines, and can easily be substituted by the operator when those on the machines are worn. The average compositor quickly learns all the requirements of the machine, and by study and practice will soon attain average speed in operating. A book containing engravings illustrating all parts of the machine, and also complete instructions for its operation and care, is sent with each machine, or will be sent, postpaid, on receipt of fifty cents.

Table matter of the class ordinarily appearing in newspapers, town reports, etc., can be set to advantage on the machine. Any operator who has had experience in laying out market **Table Matter Set** reports, ball scores, etc., when setting **on the Machine** type by hand, will be able to produce this same class of work without difficulty on the machine, even if the table is to contain vertical rules, as is shown in the following example :

p.m	a.m	a.m	a.m	Lv.	Ar.	a.m	a.m	a.m	a.m	p.m
2.49	10.45	5.55	5.00	.....	Boston .....	8.10	9.20	9.45	12.37	
3.27	11.20	7.00	6.05	.....	Salem .....	7.32	8.48	9.10	11.57	
3.34	11.26	7.07	6.11	.....	Peabody ....	7.25	8.41	9.04	11.51	
3.38	11.30	7.11	6.15	..	Danversport ..	7.18	8.35	8.58	11.45	
3.42	11.34	7.15	6.25	.....	Danvers ....	7.15	8.32	8.55	11.42	
3.47	11.38	7.19	6.28	...	Ferncroft....	7.07	8.26	8.50	11.37	
3.49	11.41	7.22	6.30	...	Hathorne....	7.05	8.23	8.47	11.34	
3.52	11.44	7.25	6.33	Ar..	Howe ..Lv.	7.02	8.20	8.44	11.31	

Many large and complicated tables have been set on the machine, and we will furnish samples of such work on application. Matter without vertical rules between the columns, as in the example below, can be set about as rapidly as straight reading matter.

Wheat		Open	High	Low	Clos	Prev
Minneapolis..	December..	108½	108½	106½	106½	108½
	May.....	112½	112½	110½	111	112½
Duluth.....	December..	108	108½	106½	107	108½
	May.....	112½	112½	111	111½	112½
Toledo.....	December..	104½	104½	102½	102½	104½
	May.....	108½	108½	106½	107½	108½
Kansas City..	December..	98	98	95½	95½	97½
	May.....	102½	102½	100½	100½	102½

The simplicity of the **Unitype** is one of its strong points. It can be safely left to ordinary compositors to operate, without the help of an expert **Machinists are** or a machinist. Of course, the operator **Not Required** must be first instructed in its use, which is done by a capable instructor on installation of machine. By a little intelligent application and care, the machine is soon thoroughly understood; and persistent energy and effort quickly lead to a satisfactory output. Of the hundreds of the earlier pattern machines in use not one is in the care of a machinist; with very few exceptions they are in the hands of people who were compositors in the office before the machine was installed, and who soon became proficient operators, although they had had no previous experience in machine composition.

The **Unitype** uses foundry type. The type has special nicks on the front or foundry nick side, for the purposes of distribution, and is furnished at a **Foundry Type is** special price—less than type for hand use. **Used in Machine** Century Expanded and Century Oldstyle have cast nicks and are carried in stock, and besides these there is a large variety of faces to select from and which will be furnished to order. Each machine is built to handle only one body of type—an eight point machine handles only eight point body. But it does not matter what face is cast on that body. In fact, eight point type with seven point face is frequently supplied, which gives the effect in print of seven point type leaded with one point leads. It is quite common to have an eight point face on nine point body also. The two specimens which appear on opposite page show the appearance of seven on eight, and eight on nine point type; more on this subject will be found on pages 26 to 28.



The executive representatives of the Union Pacific and Southern Pacific Railroads, who have been in Texas for several days working on details of the plan for consolidating some outside agencies of the two lines, are reported to have completed their work. Hundreds of soliciting freight and passenger agents are likely to be thrown out of employment about the first of next month. The Ivy Courier says that negotiations have lately been completed whereby the Puritan will buy the Colonial and Northeastern, one of the divisions of the New England. An unconfirmed rumor is now being

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Seven Point on Eight Point Body, Set Solid.

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Of course, the measurements of the challenger are a topic of frequent and very often exciting discussions between the various yachting "sharps" of both this and other cities. It appears to be a pretty general conclusion on their part, now that they have gone over her as critically as their eyes alone will avail, that she has been built and designed for light weather racing. This is deduced from her huge rig aloft, the lines of her

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Eight Point on Nine Point Body, Set Solid.

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The **Unitype** is an evolution from the Simplex. It combines all the advantages of both the Standard and Adjustable machines as formerly constructed, and is even more efficient than that remarkably efficient machine. From years of experience has been developed a radically improved machine, with greater speed, fewer complications, less operating expense, and still greater economy. **Many Advantages**



# THE UNITYPE KEYBOARD

$\frac{1}{2}$	)	Q	W	C	I	O	U	M	F	Y	9	6	3	ffi
$\frac{3}{4}$	(	J	B	R	A	N	D	S	G	X	8	5	2	ffi
$\frac{1}{8}$	V	K	P	Z	T	H	E	L	\$	O	7	4	1	ff
$\frac{3}{8}$	$\frac{1}{4}$	q	w	c	i	o	u	m	f	y	z	—	fi	fi
$\frac{5}{8}$	&	j	b	r	a	n	d	s	g	x	.	'	:	!
$\frac{7}{8}$	.	k	p	v	t	h	e	l	space	space	space	.	:	?

On no composing machine can the keys be operated as rapidly as on the **Unitype**; it is faster even than a typewriter, as on none can two keys be operated at one time, while on the **Unitype** two, three, four, five and six keys can be touched at one time, thus getting unusual speed. And these combinations are remarkably frequent, in fact so frequent that a combination of at least two letters which may be operated at one touch occurs in almost every word in the English language.

Look at the keyboard and see how simple this is. Any succession of letters running from left to right may be operated at one touch, and it does not matter which row they are in; take a few illustrations: *t h e* are letters running from left to right, so that when touched with three fingers at one stroke will be composed in regular order; so, too, the letters *a n d*, which are just above *t h e*; the word *b r a n d* s can be operated at one stroke by touching with six fingers. A capital letter can be operated with any lowercase letter. On any other machine each letter would have to be touched separately, so you can see what an immense advantage the **Unitype** has in the matter of speed.

To illustrate the frequency of the combinations, take the first paragraph above as an example: On *£*—the three characters are

touched at one time; *n o* *£*—the *o* and space at one time; *com pos ing* *£*—two combinations of three letters each and one of four; *m a ch ine* *£*—the *ch* are touched simultaneously and the *line* and space all together; *can* *£*—all at one operation.

The type channels are so arranged that the letters will not be transposed when operated in this way, and it is because of this advantage of being free to operate the keys in this manner that it is possible to set type so rapidly on the **Unitype**.

The operator on the **Unitype** can get a bigger output than on any other machine, as the time saved on the keyboard more than offsets the time required to justify the lines.

Taking the beginning of this article and counting 1,000 characters, we find that they require only 488 strokes on the **Unitype**, while any other machine would require 1,000—a saving of 512, more than one-half of the entire amount. This enormous saving enables the operator to justify his lines and produce more composition than a Hot-Metal Machine which justifies automatically, and with an inexpensive helper to justify the lines the output is vastly greater than that of any other machine.

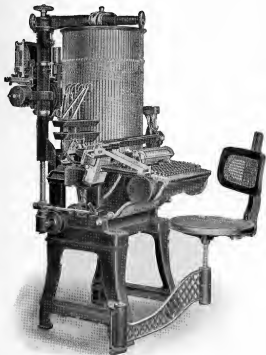
## Power for the Unitype

As the **Unitype** requires less than one quarter of a horse power it can be connected with any shaft which runs at uniform speed. In printing offices using water motors the speed is subject to variations as the load on the motor is increased or decreased by stopping or starting the presses, etc. In such cases a separate small motor for the machine will give better results. In many offices the machine is driven by small gasoline or kerosene engines. Write us about the kind of power available, and conditions in your office, and we will give you the benefit of our experience in this line.

Where electric current is available this form of power is recommended, as it is steady, clean, and convenient. If you use a large electric motor, which is in operation part of the time only, it is advisable to have a small motor to drive the machine, but if the large motor runs constantly the load added by the machine will not be perceptible. When a separate small motor is used it is better to have it attached to the machine. When so equipped machines may be placed in the most convenient location independent of shafts and belts. The mechanism for connecting the motor to the machine is simple, and a mechanic is not required to attach it, but the wiring for the motor must be done by a competent electrician.

The prices charged for attached motors depends upon the current used. For **Direct Currents**, 110 or 115 volts, the price is \$75.00; for 220 or 230 volts, \$80.00; for **Alternating Currents** of 52 or 104 volts, 16,000, 12,000, or 7,200 alternations, \$90.00. These prices (subject to change) are net, f. o. b. factory, and cover all parts necessary except wiring. Prices for attached motors to be used on currents other than those above mentioned will be furnished on application. For direct currents a quarter-horse power motor is used, but for alternating currents motors of a third horse power are used, because on alternating currents small motors are run by induction so have relatively less reserve force. But the extra power is needed only to keep the speed steady when one side or the other of the machine is thrown into or out of use.

# THE UNITYPE



Keyboard, Space Trays and Delivery Galley  
of the Unitype.

The **Unitype** sets and distributes matter in any measure up to 30 ems pica wide. It occupies about the floor space of a printer's stand, requires less than a quarter horse power to run it, and will handle both news and book composition. **The price, \$1,500**, including 400 pounds of type, a special combined hanger, countershaft and pulleys, sort cabinet, and galleys, twenty brass galleys, tools, extra small parts, etc.—in fact, everything that is necessary for its operation.

**For Either News  
or Book Work**

## □ MORE IN DETAIL □

ANSWERING QUESTIONS FREQUENTLY ASKED

On the **Unitype** the distributing and setting are done independently, but both on the same machine. The distributing mechanism puts a fresh supply of type in the top of each channel, while the setting mechanism takes them from the bottom of the same channel. The distributor will supply the type much faster than the operator can use it, so distribution is going on only part of the time. The mechanisms for driving the distributor and the setter work independently. The appliances for starting and stopping are convenient to the hand of the operator, who shuts off the distributing mechanism when it gets too far ahead of the setter. A galley of dead type is put in the loader, which automatically helps itself to lines for distribution as they are needed. The operator pays no further attention to the loader until the galley is empty, when another full galley is put on. Matter can be set solid, leaded, or double-leaded, as desired. Matter can be distributed solid or leaded; when distributing leaded matter, the leads are automatically stacked up in the lead receiving box, ready for use again.

No newspaper publisher who has 50,000 ems or more to set per week can afford to continue hand composition, as a **Unitype** will set it for half the cost, or less. A publisher with that amount of composition must have two or more hand compositors to set it, while one of them could readily set more than that amount on the machine, and have time for other work.

A good operator on the machine readily averages to set and distribute three or four times as much type as a hand compositor. It is a simple proposition. It is an unusually good compositor who averages to set 1,000 ems per hour by hand, every day. It takes 25 per cent. of the time to distribute, which makes the average per hour 750 ems set and distributed. A competent operator on the machine readily sets and distributes 3,000 to 3,500 ems per hour, which is the work of four hand compositors. An operator of fair ability easily sets and distributes 2,500 ems per hour on the machine, which is more than the work of three hand compositors of ordinary skill.

By the use of two people on a **Unitype** its output is doubled, 5,000 to 7,000 ems per hour being a common performance on a machine by two good operators. Even two "green" operators will often exceed 4,000 ems per hour after a few weeks' practice. No time is taken for distribution on machine, as it goes on simultaneously with setting. When two work on one machine, one operates the keyboard while the other justifies the type.

**Two Operators  
Double Output**

There is seldom so great an output secured in a weekly office as in a daily, because there is not the same push for product—there is more time, and everything proceeds at a more leisurely pace, which spirit necessarily affects the operator. Probably the average amount set by a fair operator on the machine, in a country weekly office, is from 100,000 to 130,000 ems per week. In daily offices, from 300,000 to 360,000 ems per week is nearer the average output of two efficient operators.

**Large Product  
Under Pressure**

Proofs are corrected from a case, same as hand set matter. There is no necessity for stopping the machine for that purpose. When on a rush, let the operator work away on fresh copy while some one else corrects the proofs. Using foundry type, it is not necessary to change a whole line if a single letter is wrong, or to reset a whole paragraph when it is necessary to change the wording of an article which has been set.

**Corrections are  
Made from Case**

"Cleaner" matter is set on the **Unitype** than on any other machine, thus greatly reducing the cost of correcting and reading, and also eliminating the glaring errors that fill the publications which are slug set.

The operator in justifying the lines reads them at a glance, and finding an error has only to reach over for the type with which to make its correction, and does this before spacing out the line. With a little care, proof reading can be entirely dispensed with on some classes of matter just as it could be if hand set by a careful compositor. Utter incompetence or extreme carelessness would be the only reason for a dirty proof, the same as in hand composition.

The fact that employing a second person on the machine immediately doubles its output makes it particularly adaptable to all of the varying requirements of a newspaper office. In daily offices, the bulk of the live copy usually comes in late. During the last hour or so, or whenever it is necessary to get up a lot of matter quickly, two people can work on the machine and rush it up; at other times one person can

**Meets All Needs  
in Daily Offices**

operate the machine while the other sets ads, etc. Where the full capacity of two operators is required it can be secured by employing two on one machine, making it unnecessary to buy a second machine to get the product—which means a large saving on investment.

In weekly offices, the most important news—the news which gives a paper prestige—is what is published about the affairs occurring so late that people know little or nothing about them till the paper tells the story. When type is set by hand, it is often a physical and financial impossibility to handle such news in full, so the brief facts are given and the interesting details left for next issue, by which time the details have been published by others and have lost interest. With a **Unitype** in the office

**Gives a Weekly** large amounts of matter can be set on  
**Great Advantage** publication day by putting two people on the machine—a regular daily paper rush.

Even at the last minute a big story can be handled by the editor sitting down to the machine and “writing” his story in type, and it will be in the form quicker than he could write the copy. One publisher has a telephone beside the machine, and complete reports of ball games, etc., are telephoned from the field direct to the operator, who sets them as fast as received—and the paper, with a full account of the game, is on sale immediately after the game is ended.

Publishers of weekly papers generally print the inside pages several days before the outside. Thus when copy for a large advertisement comes

**All Pages Open** in late it is frequently impossible to allow  
**Until Press Day** space for it on the outside pages, and the advertisement has to be held over to the next week; or, important news matter cut out to make space. As the machine sets matter with greater speed, both inside and outside forms may be printed on the same day, or at least on succeeding days, making every page available for late advertisements.

The feasibility of using two people on the machine is of advantage also when job work is rushing. The whole force can be kept on job work until

**Helps in a Rush** a couple of days before issue, in weekly  
**of Job Work** offices, then two of them put on the machine and the paper rushed out in a hurry. Under other circumstances the one operator can set the paper alone during the week, with perhaps a little help just before going to press, if rush of copy requires.

Publishers who lack sufficient composition to warrant the installation of a machine for the newspaper alone, but who have briefs, catalogues, etc., to set, will find the machine especially adapted to their requirements, as it sets

**Sets Varying or**  
**Wide Measures**



and distributes any measure up to 30 ems pica wide, and can be changed from one measure to another in two minutes.

The keyboard of the **Unitype** can readily be adapted to other languages than English. Machines have been fitted for use in German, French, Polish, Bohemian, Norwegian, Swedish, Slovak, **Many Languages** Lithuanian, Italian, Spanish, etc. **Ma- Set on Machine** chines that are arranged to set other languages can also be used in setting English, using the same or different type, the keyboard remaining the same. Any language can be handled which does not require more than ninety commonly used characters (including a space and en quad).

Different sizes of faces may be used by having them cast on the same body, and fonts are readily changed in the machine. For instance, many ten point machines are used with two fonts of **Different Faces** type—one font having an eight point face **on Same Body** on ten point body for news work, the other having a suitable face on ten point body for law briefs, pamphlets, catalogues, etc. With this combination the publisher has facilities for setting news in eight point leaded; advertisements in single or double-column measure, either eight or ten point face; and briefs, books, or catalogues, in eight point or ten point face. The eight on ten point set solid looks in print as if leaded, the extra two points shoulder taking the place of a two point lead. As most news matter is set leaded, this makes little or no difference; even in papers previously set solid, the use of such leaded matter simply means the use of less plate matter or miscellany, and makes the local news matter more prominent, more attractive and more easily read. On the following page is shown matter set on a ten point machine, with two fonts of type as here described. There is nothing to prevent the use of several different fonts in this manner if desired.

Other combinations are also used. Some prefer a nine point machine, with one font of eight point face on nine point body, and another with a very large nine point face, practically a ten point. When the eight point face is set **Other Similar** solid, it looks in print as if leaded with one **Combinations** point leads (as plate miscellany is leaded usually). How this combination looks is shown on page 23.

Machines are frequently used in this way by book publishers and printers, who have two or more fonts with different faces cast on the same size body, using old style or modern faces as may be required. When the desired effect is produced in print, it is no matter what body the face is on. By this method a large variety of work can be produced with one machine.

[All the matter on this page was set on the same Ten Point machine, with two fonts of type, one having an eight point face, the other a law brief face, both faces cast on ten point body.]

The principal features of the Constitution of California are similar to those of most of the recently formed state constitutions. It establishes an elective judiciary, and confers on the executive a qualified veto. It prohibits the creation of a state debt exceeding \$300,000. It provides for the protection of the homestead from execution, and secures the property of married females separate from that of their

Law Work—in Law Brief Face on Ten Point Body.

Ladies' Suits of choice Black and Blue  
Jackets, well-made, would be consid-  
ered good value in many **\$10.00**  
stores at \$12.00, our price,  
Adv.—in Eight Point Face on Ten Point Body.

The final hearing before the Referee at Richmond Springs, in the matter of the accounting of the administrator of the estate of A. C. Lewis, deceased, was held at Cooperstown, Monday. W. H. Johnson, and Mr. Haywood personally appearing for the administrator, and A. R. Gibbs, J. Lee Tucker and D. W. Miller for other parties in interest. The application of the administrator for leave to sell real estate to pay debts will come before Surrogate Arnold at the supreme court chambers in Oneonta early next month, when it is expected that some sensational developments will come up.

News—in Eight Point Face on Ten Point Body.

We see the same faces here year in, year out, and the story they tell us so plainly is one of absolute confidence in quality and prices. A confidence that is from an honest saving of money—of getting the most for one's money. The more money "My Clothiers" save for men the greater their permanent trade will be.

The range of prices is a big one on Winter suits and Overcoats, \$5.00 to \$20.00. Here are four hints at prices between: \$7.50, \$10.00, \$12.00 and \$15.00.

Business Suits, Suits for Dress, Suits for everyday wear, Sack Suits, Cutaway Frocks, Serges, Clays, Scotchies, Chevlots, Worsteds, Tweeds.

Adv.—in Eight and Ten Point Faces, Both on Ten Point Body.

[All the matter on this page was set on the same Nine Point machine, with three faces of type, a ten point face, an eight point face, and a nine point old style face, all faces being cast on nine point body.]

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Extending from the water-battery of Fort Marion south along the water-front of the town to the United States barracks, stands a sea-wall of coquina capped with New England granite. It affords a necessary protection against the encroachment of the sea. The site of St. Augustine is so low that under certain conditions of wind and tide the waves would inundate much of the town. In heavy east storms the water dashes over the top of the wall. The need of such a barrier against the sea was recognized

Book Matter—Ten Point Face Set Loaded.

---

One of Mr. Ryman's customers noted a peculiar unpleasant taste in cream supplied by him, and he took a sample to the chief milk inspector, who analyzed it and discovered the presence of formaldehyde, or embalming fluid. The Board of Health asked Mr. Ryman to account for the combination, and he declared he could not imagine how formaldehyde got into the cream.

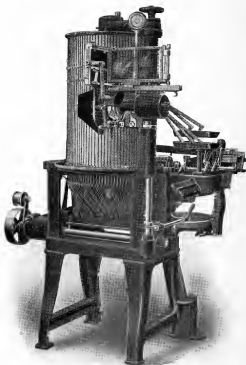
Possibly the milk inspector is a person of more agile fancy. The District Attorney also has an imagination in good working order, and he may be able to see with his mind's eye things that are hidden from Mr. Ryman and even make them appear real to a jury.

News—Eight on Nine Point, Set Sold.

---

It was in January and a terrible fall of snow was pelting down. The snow eddied through the streets and lanes; the window panes seemed plastered with snow on the outside; snow plumped down in masses from the roofs; and a very sudden hurry had seized on the people, for they ran and jostled, and fell into each other's arms, and as they clutched each other fast for a moment, they felt that they were safe for that length of time. Horses and coaches seemed frosted with sugar. The footmen stood with their backs to the carriages, so as to turn their faces from the wind and snow. The foot passengers kept in the shelter of tall buildings

Book Matter—Nine Point Face, Set Loaded.



The rear of the Unitype, showing Distributer.  
Note its general simplicity.

# Type for the Unitype

The following pages contain specimens of type which can be furnished promptly, nicked and ready for use with machines. The different faces shown were selected as being especially **Desirable Book and News Faces** desirable for use on news and pamphlet work. Many other type faces can be furnished on order. If some special face is desired, send us specimens of it, and we will notify you whether or not it can be supplied for machine use.

The type is the same as for hand composition, but is especially nicked for **Same Type Used for Hand Work** machine use.

On page 12 the use of fonts with face one or two sizes smaller than the body on which they are cast, is explained; and specimens of eight point cast on ten point body, eight on nine point, **Fonts With Face on Larger Body** etc., are shown on pages 26 and 27. Such fonts are most often used in offices having both news and book work; but many newspapers are set in eight on ten point, etc., for such type appears in print as though it were leaded, and the use of leads is thereby largely dispensed with.

Leads of ordinary height may be used with machine type, but it is better to have them the same height as the machine spaces and quads, as leads of this height cover up, and keep dirt out of **Leads for Use in the Machine** the nicks in the type. For periodical work, in which leads receive harder usage, the use of brass is advised. Machine leads, if ordered from foundries, must always be specified ".840 high."



## EIGHT POINT CENTURY EXPANDED

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations, and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comfort of millions, and yet may actually contribute a great deal less to the permanent thought of his land than did Noah Webster with his spelling book, the founder of a metropolitan newspaper, or the publisher of a woman's journal. The men who are most in people's mouths during their own lifetime are in the majority of cases entirely out of the memory of the next generation. Who remembers now that Mr. Bingham was the richest man in the United States after the Revolution, and that Silas Wright did not come very far at one time from being president? The real criterion of greatness is that a man should represent the spirit of his countrymen, that he should show forth a knowledge of the human soul, that his influence should go ringing down the centuries, so that men in and out of his own country shall recognize him not only as a great American but a great character in

Lowercase a to z, 14% ems.

## EIGHT ON NINE POINT CENTURY EXPANDED

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations, and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comfort of millions, and yet may actually contribute a great deal less to the permanent thought of his land than did Noah Webster with his spelling book, the founder of a metropolitan newspaper, or the publisher of a woman's journal. The men who are most in people's mouths during their own lifetime are in the majority of cases entirely out of the memory of the next generation. Who remembers now that Mr. Bingham was the richest man in the United States after the Revolution, and that Silas Wright did not come very far at one time from being president? The real criterion of greatness is that a man should represent the spirit of his countrymen, that he should show forth a knowledge of the human soul, that his

Lowercase a to z, 14% ems.

#### NINE POINT CENTURY EXPANDED

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Lowercase a to z 14 ems.

#### EIGHT ON TEN POINT CENTURY EXPANDED

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations, and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comfort of millions, and yet may actually contribute a great deal less to the permanent thought of his land than did Noah Webster with his spelling book, the founder of a metropolitan newspaper, or the publisher of a woman's journal. The men who are most in people's mouths during their own lifetime are in the majority of cases entirely out of the memory of the next generation. Who remembers now that Mr. Bingham was the richest man in the United States after the Revolution, and that Silas Wright did not come very far at one time from being president?

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#### NINE ON TEN POINT CENTURY EXPANDED

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comfort of millions, and yet may actually contribute a great deal less to the permanent thought of his land than did Noah Webster with his spelling book, the founder of a metropolitan newspaper, or the publisher of a woman's journal. The men who are most in people's mouths during their own lifetime are in the majority of cases entirely out of the memory of the next generation. Who remembers now that Mr. Bingham was the richest man in the United States after the Revolution, and that Silas Wright did not

Lowercase a to z, 14 ems

#### TEN POINT CENTURY EXPANDED

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comfort of millions, and yet may actually contribute a great deal less to the permanent thought of his land than did Noah Webster with his spelling book, the founder of a metropolitan newspaper, or the publisher of a woman's journal. The men who are most in people's mouths during their own lifetime are in the majority of cases entirely out of the

Lowercase a to z, 14 ems.



#### EIGHT POINT CENTURY OLDSTYLE

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations, and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comfort of millions, and yet may actually contribute a great deal less to the permanent thought of his land than did Noah Webster with his spelling book, the founder of a metropolitan newspaper, or the publisher of a woman's journal. The men who are most in people's mouths during their own lifetime are in the majority of

Lowercase a to z, 13% ems.

#### NINE POINT CENTURY OLDSTYLE

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations, and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect upon the comforts of millions, and yet may actually contribute a great deal less to the permanent thought

Lowercase a to z, 14 2-9 ems.

#### TEN POINT CENTURY OLDSTYLE

To select the greatest men in American history is like standing in a grove of the gigantic trees of California and trying to make up your mind which appears nearest the sky; for the great freedom of opportunity and individuality that is so prevalent in American life has produced a great many notable men, famous during their own lifetime, whose principles and standard of life have been taken up by later generations, and whose influence has spread out upon the nations. The inventor of a horse reaper or of an air-tight cooking stove, the harnesser of electric power and the organizer of great railroad systems has a profound effect

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